REMARKS

Claims 1-18 and 21-32 are pending.

Claims 31-32 are withdrawn from consideration.

Claims 1-18 and 21-30 are rejected.

The final office action dated Feb. 24, 2009 indicates that claims 1-18 and 21-30 are rejected under 35 USC §101 for being directed to non-statutory subject matter. The '101 rejection has been rendered moot by the amendments above to claims 1 and 21. Support for the claim amendments is provided in the Background, which indicates that model definitions are created by a computer.

The final office action further indicates that claims 1-3 and 6-13 are rejected under 35 USC §102(b) as being anticipated by Gupta U.S. Patent No. 6,405,308 and that claims 4-5, 14-18 and 21-30 are rejected under 35 USC § 103(a) as being unpatentable over Gupta alone. Claims 1 and 21 are base claims.

The present application describes a product definition that describes a collection of components for different possible configurations of a product and that also provides details as to how the components are defined (engineering requirements), developed, and manufactured. For example, Figure 8 illustrates a product definition 800, which includes components and details for different configurations in the aircraft family.

The product definition can be used to create a deliverable configuration. A product configuration specification is applied to the product definition. The product configuration specification is a filter composed of selected options. When applied to the product definition, a deliverable configuration is produced. For example, Figure 9 illustrates a result of applying a product configuration specification 902 to the product definition 800.

Base claim 1 has been amended to clearly recite what a product definition is and how it is created. Specifically, claim 1 has been amended to recite that the

product definition describes a collection of components for different possible configurations of a product and also provides details as to how the components are defined, developed, and manufactured. Claim 1 has been further amended to recite a method of creating the product definition. The method includes:

> creating instancings of one or more usage-based product definition inputs, the inputs including components and engineering requirement callouts for the different configurations;

> assessing applicability expressions, engineering requirements, and manufacturing availability to determine which instancings are available and valid for the different configurations; and

> generating the product definition based on all instancings that are valid and available.

Support for the amendment of claim 1 is provided at page 5, lines 15+ of the specification.

The method of amended claim 1 improves upon the industry-old practice of defining products in terms of engineering assemblies and defining end-item product usage of an assembly on an external bill of material or on drawing sheets (see the Background). The method of amended claim 1 allows for rapid and efficient option-based changes in the product configuration process. It can reduce errors, improve consistency and decrease product configuration time (see Summary). .

The method of amended claim 1 is not taught or suggested by Gupta. Gupta discloses a system for interactively selecting and configuring a product of a product line based on availability and compatibility of features and options (Abstract). Gupta describes a maintenance system 202 for creating a product definition. The maintenance system 202 maintains a parts catalog 204, parts relationships 206 and product definitions 208. (col. 5, lines 55-63).

The product definition 208 is generated by population of a product with its component parts (col. 7, lines 26-35). Parts in a product definition 208 are related or classified. Part-to-product relationships include "included parts", "required choices" and

optional parts" (col. 2, lines 25-26 and col. 6, lines 22-31). Part-to-part relationships include "requires," "choice," "includes," "can't work with," etc. (col. 6, lines 22-31).

Gupta doesn't teach or suggest a product definition that describes a collection of components for different possible configurations of a product and also provides details as to how the components are defined, developed, and manufactured. Gupta's product definition 208 is little more than a collection of parts 204 and relationships 206.

Gupta does not teach or suggest inputs to a product definition that include engineering requirement callouts. Gupta only discloses parts 204 and relationships 206.

Gupta does not teach or suggest assessing applicability expressions, engineering requirements or manufacturing availability as part of creating a product definition. All of Gupta's assessments are performed during configuration of a desired product. Gupta describes a user configuration system 212 for allowing a user to select parts for a desired configuration (col. 2, lines 52-62). The configuration system 212 evaluates the current state of a configuration based on the product definition, part s relationship and state information (col.2, lines 63-65).

Gupta does not teach or suggest applicability expressions. According to the specification, applicability is a statement defining the conditions under which an item can be applied. The expression may include operands and Boolean operators. Gupta's relationships are not based on Boolean operators. Gupta only describes parts 204 and relationships 206.

Therefore, Gupta does not teach or suggest the method of amended claim 1. Accordingly, the rejections of base claim 1 and its dependent claims 4-18 should be withdrawn. Claims 2-3 have been cancelled.

Claim 21 has also been amended. Amended claim 21 and its dependent claims 22-30 should also be allowed over Gupta for the reasons above. Gupta doesn't teach or suggest an air vehicle definition that describes a collection of components for different possible configurations of an air vehicle and also provides details as to how the components are defined, developed, and manufactured. Gupta doesn't teach or suggest assessing an applicability expression, an engineering requirement, and a manufacturing availability expression as part of creating a product definition.

The office action indicates that claim 31 and its dependent claim 32 are withdrawn from consideration. Claim 31 has been amended to depend from claim 1, thus removing the rationale for withdrawing claims 31-32 from consideration.

The Examiner is encouraged to contact the undersigned to discuss any remaining issues prior to mailing another office action.

Respectfully submitted,

/Hugh Gortler #33,890/
Hugh P. Gortler
Reg. No. 33,890
(949) 454-0898

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